

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A substantially purified polypeptide comprising:

(a) an amino acid sequence set forth as SEQ ID NO: 14, ~~or a variant thereof having a conservative substitution; or~~

(b) an immunogenic ~~fragment~~ polypeptide comprising an immunogenic epitope of eight to ten consecutive amino acids of a polypeptide ~~the protein~~ comprising the amino acid sequence set forth as SEQ ID NO: 14, ~~or variant thereof having a conservative substitution;~~

(c) ~~a polypeptide with at least 90% sequence identity to the amino acid sequence set forth as SEQ ID NO: 14 that is specifically recognized by an antibody that specifically recognizes the protein comprising the amino acid sequence set forth as SEQ ID NO: 14; or~~

(d) ~~a polypeptide that has at least 90% sequence identity with the amino acid set forth as SEQ ID NO: 14 and that, when processed and presented in the context of Major Histocompatibility Complex molecules, activates T lymphocytes against cells that express the protein encoded by the amino acid sequence set forth as SEQ ID NO: 14.~~

Claim 2 (currently amended): The substantially purified polypeptide of claim 1, wherein the polypeptide comprises the amino acid sequence set forth as SEQ ID NO: 14, ~~or a variant thereof having a conservative substitution.~~

Claim 3 (currently amended): The A substantially purified polypeptide ~~of claim 1,~~ wherein the polypeptide ~~comprises an immunogenic fragment comprising at least ten consecutive amino acids~~ of the amino acid sequence as set forth as SEQ ID NO: 14, ~~or a variant thereof having a conservative substitution.~~

Claim 4 (currently amended): ~~The A~~ substantially purified polypeptide ~~of claim 1,~~ wherein the polypeptide ~~has~~ comprising an amino acid sequence with at least 90% sequence identity to the an amino acid sequence as set forth as SEQ ID NO: 14 wherein the polypeptide is

~~expressed in prostate cancer cells, breast cancer cells, or both. and is specifically recognized by an antibody that specifically recognizes the amino acid sequence as set forth as SEQ ID NO: 14.~~

Claim 5 (canceled).

Claim 6 (currently amended): A composition comprising a the polypeptide of claim 1 and a pharmaceutically acceptable carrier.

Claims 7-9 (canceled).

Claim 10 (previously presented): A substantially purified recombinant nucleic acid molecule encoding the polypeptide of claim 1.

Claims 11-14 (canceled).

Claim 15 (previously presented): The substantially purified recombinant nucleic acid molecule of claim 10, operably linked to a promoter.

Claim 16 (currently amended): The substantially purified recombinant nucleic acid molecule of claim 15, wherein the nucleotide sequence encodes a polypeptide comprising the amino acid sequence as set forth as SEQ ID NO: 14, ~~or a variant thereof having a conservative substitution.~~

Claim 17 (currently amended): The substantially purified recombinant nucleic acid molecule of claim 15, wherein the nucleotide sequence encodes a polypeptide comprising ~~the amino acid sequence of an immunogenic fragment of the protein comprising~~ an immunogenic epitope of eight to ten consecutive amino acids of the amino acid sequence as set forth as SEQ ID NO: 14, ~~or variant thereof having a conservative substitution.~~

Claims 18-19 (canceled).

Claim 20 (previously presented): A method for eliciting an immune response in a subject, comprising administering to a subject a composition, comprising:

- (a) the polypeptide of claim 1;
- (b) a substantially purified nucleic acid encoding the polypeptide of claim 1 in an expression vector;
- (c) an antigen presenting cell pulsed with a polypeptide comprising an epitope of the polypeptide of claim 1, or an immunogenic fragment thereof thereby eliciting an immune response in the subject.

Claims 21-23 (canceled).

Claim 24 (previously presented): The method of claim 20 wherein the subject has prostate cancer.

Claim 25 (previously presented): The method of claim 20, wherein the subject has breast cancer.

Claim 26 (previously presented): The method of claim 20, wherein the subject is a female at risk for developing breast cancer.

Claim 27 (currently amended): The method of claim 20 wherein the administered composition further comprises CD8+ cells that are sensitized with antigen presenting cells pulsed with a polypeptide comprising an epitope of the protein having an amino acid sequence as set forth as SEQ ID NO: 14 ~~or a variant thereof having a conservative substitution.~~

Claim 28 (currently amended): The method of claim 20, further comprising co-administering to the subject an immune adjuvant ~~comprising~~ selected from the group consisting of a non-specific immune adjuvant, a subcellular microbial product and fraction, a hapten, an immunogenic protein, an immunomodulator, an interferon, a thymic hormone, ~~or~~ and a colony stimulating factor.

Claim 29 (currently amended): The method of claim 20, comprising administering an antigen presenting cell pulsed with a polypeptide comprising an epitope of the protein having an amino acid sequence as set forth as SEQ ID NO: 14, ~~or a variant thereof having a conservative substitution.~~

Claim 30 (previously presented): The method of claim 20, wherein the substantially purified nucleic acid is in a recombinant virus.

Claim 31 (previously presented): The method of claim 20 wherein the nucleic acid has a sequence as set forth as SEQ ID NO: 13 or a degenerate version thereof.

Claim 32 (previously presented): A method of eliciting an immune response, comprising administering to a subject a composition, comprising a recombinant bacterial cell comprising the nucleic acid molecule of claim 15.

Claim 33 (previously presented): A method of eliciting an immune response, comprising administering to a subject a composition, comprising an autologous recombinant cell comprising the nucleic acid molecule of claim 15.

Claim 34 (currently amended): The method of claim 27 wherein the CD8+ cells are cytotoxic T ~~lymphocytes~~ lymphocytes.

Claim 35 (previously presented): The method of claim 34 wherein the cytotoxic T lymphocytes are tumor infiltrating lymphocytes.

Claim 36 (previously presented): A method for detecting a cancer in a subject, comprising detecting in a sample from the subject the hybridization of a probe specific for a nucleic acid that encodes the polypeptide of claim 1, whereby the hybridization of the probe to the nucleic acid indicates that the subject has cancer.

Claim 37 (original): The method of claim 36, comprising detecting the transcript.

Claim 38 (original): The method of claim 36, comprising detecting the protein.

Claim 39 (original): The method of claim 36, comprising contacting RNA from the cell with a nucleic acid probe that specifically hybridizes to the transcript under hybridization conditions, and detecting hybridization.

Claim 40 (previously presented): The method of claim 36, comprising disrupting the cell and contacting a portion of the cell contents with a chimeric molecule comprising a targeting moiety and a detectable label, wherein the targeting moiety specifically binds to the protein, and detecting the label bound to the protein.

Claim 41 (previously presented): The method of claim 36, wherein the hybridization is detected in a sample comprising a lymph node cell of the subject.

Claim 42 (previously presented): The method of claim 36, wherein the hybridization is detected in a sample comprising a breast biopsy cell of the subject.

Claim 43 (previously presented): An antibody that specifically binds to the polypeptide of claim 1.

Claim 44 (previously presented): A method of modulating levels of a protein comprising the amino acid sequence as set forth as SEQ ID NO: 14 in a cell, comprising introducing into the cell a composition comprising: a ribozyme that specifically cleaves a nucleic acid of claim 10, an antisense oligonucleotide that specifically binds to a nucleic acid of claim 10, a DNA binding protein that binds specifically to a nucleic acid of claim 10, or a nucleic acid of claim 10, operatively linked to a promoter.

Claim 45 (previously presented): The substantially purified polypeptide of claim 1, wherein the polypeptide comprises the amino acid sequence set forth as SEQ ID NO: 14.

Claim 46 (previously presented): The nucleic acid of claim 10, comprising the nucleic acid sequence as set forth as SEQ ID NO: 13.

Claim 47 (previously presented): A vector comprising the nucleic acid of claim 15.

Claim 48 (previously presented): The method of claim 36, comprising detecting the hybridization in a prostate epithelial cell of a male.

Claim 49 (previously presented): The method of claim 36, comprising detecting the hybridization in a breast cell of a female.

Claim 50 (currently amended): A method of detecting cancer in a subject, comprising ~~detecting the~~ contacting a sample from the subject with ~~of~~ an antibody that specifically binds a protein having the amino acid sequence as set forth as SEQ ID NO: 14, ~~or a variant thereof having a conservative substitution in a sample from the subject, and~~ detecting binding of the antibody, whereby ~~detection of the binding of the antibody~~ indicates that the subject has cancer.

Claim 51 (previously presented): The method of claim 36, wherein the subject is a male and the cell is a prostate epithelial cell.

Claim 52 (previously presented): The method of claim 36, wherein the subject is a female and the cell is a breast cell.

Claim 53 (previously presented): The method of claim 51, wherein the sample comprises a lymph node cell.

Claim 54 (previously presented): The method of claim 51, wherein the sample comprises a breast biopsy cell.

Claim 55 (new): The polypeptide of claim 1, wherein the polypeptide comprises amino acids 42 to 57 of SEQ ID NO: 15.

Claim 56 (new): A nucleic acid encoding the polypeptide of claim 4.

Claim 57 (new): The nucleic acid of claim 56, operably linked to a promoter.

Claim 58 (new): A method for eliciting an immune response in a subject, comprising administering to a subject a composition, comprising:

- (a) the polypeptide of claim 4;
- (b) a substantially purified nucleic acid encoding the polypeptide of claim 4 in an expression vector;
- (c) an antigen presenting cell pulsed with a polypeptide comprising an immunogenic epitope of eight to ten consecutive amino acids of the polypeptide of claim 4, thereof thereby eliciting an immune response in the subject.